

A NEW SPECIES OF SOMATOCHLORA (ODONATA) WITH
NOTES ON THE *CINGULATA* GROUP.BY CLARENCE HAMILTON KENNEDY,
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While gathering material during the past year for a list of western dragonflies, the writer has had the privilege of examining these insects in nearly all the large collections of the United States. Particular attention was paid to the genus *Somatochlora* because of the meagre data heretofore published on these rare insects. Much difficulty was experienced in finding enough material in any one collection to make adequate comparisons of related species.

The writer wishes to thank Dr. Holland and Mr. Hugo Kahl, of the Carnegie Museum, for the privilege of using the specimen in the Carnegie Museum collection as a type.

Dr. Walker has promised to monograph this genus. It certainly needs thorough overhauling by someone who can assemble all the material for careful comparison. The identity of many of the females is a matter of conjecture.

***Somatochlora walkeri* n. sp.**

Holotype.—Male, collected on the Kuskokwin River, Alaska, by A. Stecker, and now in the Carnegie Museum of Pittsburgh, Pa.

Allotype.—Female, a broken specimen in the collection of the Museum of Comparative Zoology. It is a part of the Hagen collection and is labeled "Epith. septentrionalis ♀ Hag. Saskat. Scudder, F. C. Gray's Fund." Segments 4 and 5 are missing, which give it the small size of *septentrionalis*.

Near *hudsonica*, but colour very dark and appendages different. More remotely related to *septentrionalis*, *albicincta* and *cingulata*.

Length of abdomen, male (exclusive of appendages) 32 mm., length of appendages 3 m.; female with abdominal segments 4 and 5 missing, but the abdomen without appendages is probably about 34 mm. Length of hind wing, male, 33; female 29 mm.

Male.—Colour: labium yellow, labrum black, anteclypeus creamy, postclypeus black. Frons black with metallic greenish

reflections, a brownish creamy spot on each side. Vertex and occiput almost black, rear of head black. See Pl. XIII, fig. 9.

Prothorax hidden by the heavy, white pile on the rear of the head and on the mesothorax.

Mesothorax and metathorax metallic green with coppery reflections on the lower end of the mesepisternum and the infraepisterna. Coxæ and all legs black. A suggestion of creamy along the alar edge of the mesepisternum. An obscure, narrowly elliptical, yellow spot on the posterior edge of the mesepimeron above the metathoracic spiracle. Entire thorax covered with long, creamy pile. Wings hyaline. Pterostigmata pale brown.

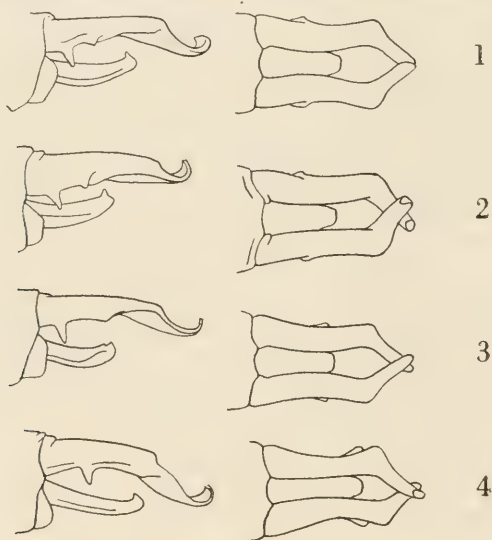


Fig. 10.—*Somatochlora septentrionalis*.

1. Appendages of male, Somer (Coll.), Labrador, M. C. Z.
2. Appendages of male, Grand Lake, Nfd., Williamson.
3. Appendages of male, Winthern (Coll.), Labrador, M.C.Z.
4. Appendages of male, Hudson's Bay, Carnegie Mus.

Abdomen with segments 1-3 and 10 black with metallic green reflections, segments 4-9 pure black except the intersegmental membranes 2-3 and 9-10, and the triangular yellow spot on the lower anterior edge of segment 3.

Structure.—This is a short, heavy species. Occiput large, reaching half way to the vertex. Lateral keel on segments 4-8.

Genital lobes small. Appendages 2-2½ times as long as segment 10. See Pl. XIII, figs. 10, 11. Viewed from above, cylindrical, arching slightly entad, the flat tips, which are half the length of the cylindrical bases, bent sharply entad at almost 90 degrees, then curving caudad with their apices bent dorsad and cephalad. Viewed laterally the externo-inferior surface of the appendage is a longitudinal groove whose external edge has a blunt tooth at its extreme base and the inferior or ental edge has a similar basal tooth, *but this just caudad of the tooth on the external edge of the groove*. Viewed laterally the apical third or the flat tip *bends abruptly ventrad*, then curves caudad, dorsad and finally cephalad. Inferior appendage about half the length of the superiors. Viewed ventrally it is triangular with its base more than half as wide as the appendage is long.

Female.—Colour as in the male but the prothorax with the posterior lobe yellow. Anterior coxa yellow on the outer or posterior side. Femora of anterior and middle legs brown on their basal two-thirds. Front wings with a tinge of dusky in the subcostal space to the first cross-vein. Hind wings tinged along the costal edge to beyond the arculus, also the first three basal cells posterior to the median dusky. Pterostigmata brown.

Abdomen with a pale area on the side of segment 1 and three pale areas on the side of segment 2, the dorsal one of the three being circular and twice the diameter of either lower spot. A large, circular, basal spot on the side of segment 3. (Segments 4 and 5 missing.) Obscure, minute, lateral spots on segments 6 and 7. Articulatory membrane between segments 2 and 3 white, between segments 7-8, 8-9 and 9-10 pale.

Vulvar lamina scoop-shaped, reaching to the middle of segment 10. It is more heavily chitinized than in the type female of *hudsonica*. The sternum of segment 9 reaches barely to the middle of segment 10. Appendages lacking.

This species has been confused with *hudsonica*. Figs. 5-8 are from the types of *hudsonica* in the Mus. of Comp. Zool. Dr. Walker has this true *hudsonica*, collected by Mr. Whitehouse at Red Deer, Alberta.*

*F. C. Whitehouse, Odonata of the Red Deer District. Can. Ent., XLIX, p. 100, Mar., 1917.

De Selys' description (Bull. Acad. Belg. (2) XXI, p. 301) agrees with the M. C. Z. types of *hudsonica*. Martin's figure 28 (Cordulines, Coll. Selys page, 27) is not the true *hudsonica* but this species *walkeri*, which is probably figured from a specimen in the Selys' collection mislabeled *hudsonica*. *Walkeri* differs from *hudsonica* in the superior appendages being closer together; in lateral view, in that the tip is directed ventrad, while in *hudsonica* it is directed caudad. In *walkeri* the two basal teeth almost overlap in lateral view. In *hudsonica*, they are apart the width of either tooth.

In coloration *walkeri* is very dark, but in a large series of *semicircularis* (Kennedy, Proc. U. S. N. M., 46, p. 111,) and in a large series of *albicincta* in the Carnegie Museum there is much variation in colour.

This species has *hudsonica* as its nearest relative. For this reason I have associated with this male the female found in the M. C. Z. collection which is most like the type female of *hudsonica* but seems to be specifically distinct. The female differs from the the *hudsonica* female in darker coloration (as does the male) and in the shorter sternum of segment 9. The only other females with which these might be confused are those of the *forcipata* group, but in none of these does the vulvar lamina exceed segment 9 in length.

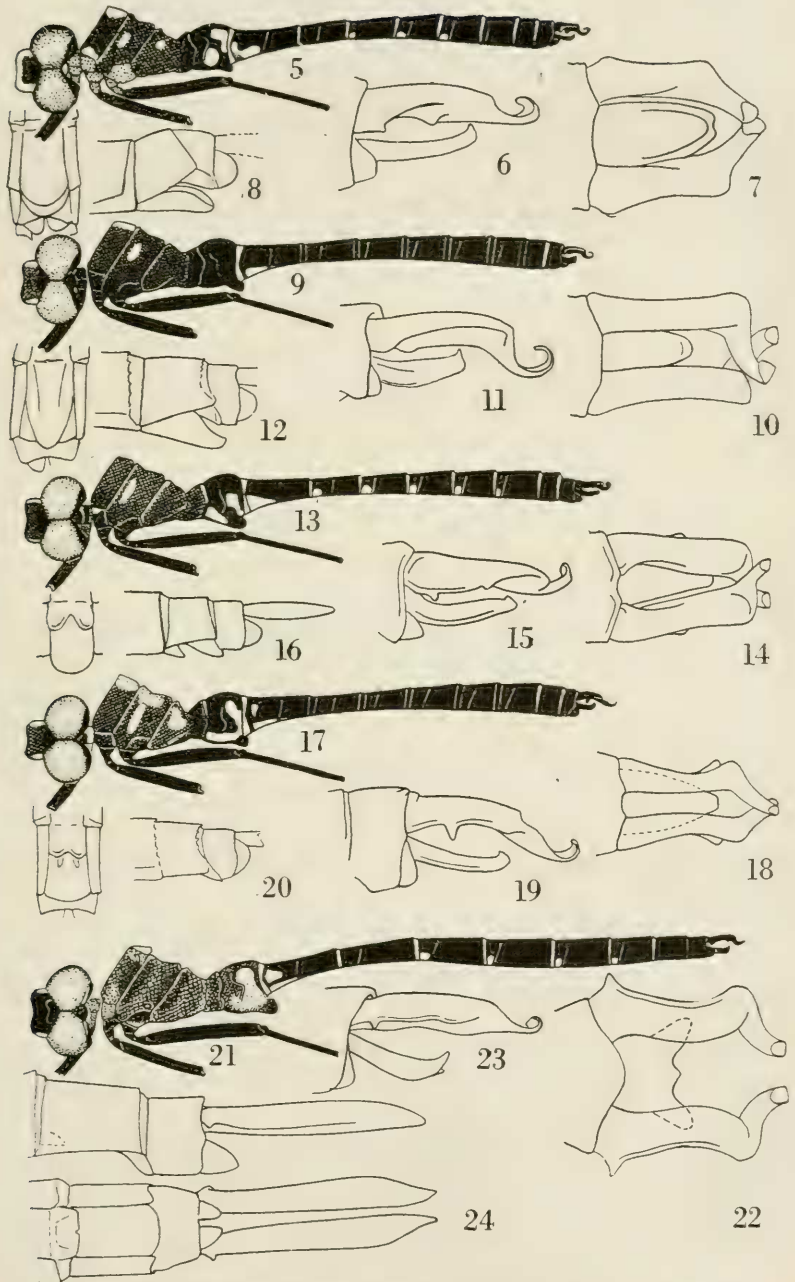
I take pleasure in naming this species for Dr. E. M. Walker, who has done so much work on our northern Odonate fauna.

Somatochlora hudsonica (Hagen).

This species resembles *albicincta*, but is readily distinguished by the greater width between the bases of the superior appendages of the male. Until Mr. Whitehouse took this species at Red Deer, Alberta, last summer, the only specimens in this country were the types in the Museum of Comparative Zoology. The types are 2 ♂'s and ♀, from Ft. Resolution, Hudson Bay Ter., Kennicott, 1861. See figs. 5-8.

Somatochlora albicincta (Burmeister)

Excepting possibly *semicircularis* this is the most common species in collections. The finest series is that in the Carnegie Museum from Mt. Ranier, Washington, collected by Jennings.



SOMATOCHLORA WALKERI, N.SP., AND ALLIES.

The less robust form which Scudder described as *eremita* appears in collections. The types of *eremita* are 3♂'s and ♀, Hermit Lake, New Hampshire, now in the collection of the Boston Society of Natural History. A ♂ and ♀ *eremita* are in Dr. Calvert's collection from the type locality. The writer has a male of this form collected by Dr. Walker at Banff. *Albicincta* and *eremita*

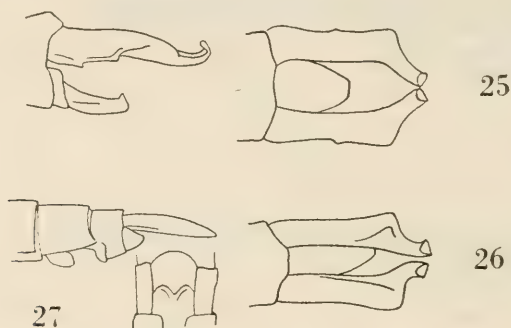


Fig. 11.—*Somatochlora albicincta*.

25. Appendages of male, type of "*eremita*" in Bost. Soc. of Nat. Hist., Hermit Lake, New Hampshire.
 26. Appendages of male in Dr. Calvert's Coll., Hermit Lake, New Hampshire.
 27. Segments 9 and 10 of female in Dr. Calvert's Coll., Hermit Lake, New Hampshire.

undoubtedly intergrade. Figs. 25-27 show specimens from Hermit Lake, fig. 25 being from the type. The male from Banff resembles fig. 26. See also figs. 13-16. The types themselves are nearer to the typical *albicincta* than the Banff or Dr. Calvert's specimens.

Somatochlora septentrionalis (Hagen).

This is the smallest species in the genus, the abdomen being but 31 mm. in length.

A male of this from Hudson's Bay was found in the Carnegie Museum. It was so different from the specimen figured by Williamson (Ent. News, XVII, p. 138, as *hudsonica*) that it was considered new until the two male types in the Museum of Comparative Zoology were examined, when it was found that these type males were intermediate between the Williamson male and this Carnegie Museum male.

Text fig. 10, 1-8 show the variation in the appendages of the four known males of this rare species.

This is evidently a very northern species as the known specimens are from Newfoundland, Labrador and Hudson's Bay. The vulvar lamina of the type female in the M. C. Z. is similar to that of the *albicincta* female but not as deeply notched, being less than a third the length of the lamina. The female can be distinguished by her very small size, for the abdomen of this type is but 30 mm. in length.

The following specimens are in American collections. ♂, Grand Lake, Newfoundland; ♀, Bay of Islands, Newfoundland, in collection of Williamson; ♂, Stag Island, Rupert Bay, Hudson's Bay, in Carnegie Museum; ♂, type, Labrador; ♂, Labrador; ♀, type, Labrador, in the Museum of Comparative Zoology. See also figs. 17-20.

Somatochlora cingulata (Selys).

This is the largest and finest of all the American *Somatochlores*. It is interesting in that in her great robustness the female develops tubercles at the base of her appendages similar in position to those on the male. What is probably a similar assumption of male characters by robust females occurs in another species of *Somatochlora* not in this *cingulata* group. In a letter to Dr. Walker I suggested it might be due to a great abundance of food, while Dr. Walker had data that would indicate it to be due to climatic differences.

Besides a male, and I think a female, in the M. C. Z. collection, whose labels I neglected to copy, the following specimens occur in the collections I have had the privilege of studying. ♂, Bay of Islands, Newfoundland, and ♀, Grand Lake, Newfoundland, in Mr. Williamson's collection. ♂ and ♀, St. Ignace Isl., Lake Superior, and a ♀, from Orient Bay, Lake Nipigon, Ontario, in the Carnegie Museum. See figs. 21-24.

EXPLANATION OF PLATE XIII.

Figs. 5-8. *Somatochlora hudsonica*, male and female types, M. C. Z. Ft. Resolution, Mackenzie, Kennicott, 1861.

Figs. 9-12. *Somatochlora walkeri*, male type, Carnegie Mus., Kuskokwin Riv., Alaska; female type, Saskat., in M. C. Z.

Figs. 13-16. *Somatochlora albicincta*, male and female, coll. Williamson; male, Bay of Islands, Nfd.; female, Kadiak Isl., Alaska.

Figs. 17-20. *Somatochlora septentrionalis*, male, Carnegie Mus., Stag Isl., Rupert Bay (Hudson's Bay); female type, Winthem (Coll.), Labrador, in M. C. Z.

Figs. 21-24. *Somatochlora cingulata*, male and female, Carnegie Mus., St. Ignace Isl., Lake Superior. In copula.

ON SOME NEW OR NOTEWORTHY COLEOPTERA FROM THE WEST COAST OF FLORIDA.—II.

BY W. S. BLATCHLEY, INDIANAPOLIS, INDIANA.

During the winter and early spring months of 1916-'17 a number of interesting species of Coleoptera were taken in the vicinity of Dunedin, Florida, some of them on Hog Island, others about the lakes and hammocks north and east of the town. Some of these species are evidently undescribed; others are worthy of note on account of their having been hitherto taken at only one or two localities in Florida. Among the undescribed forms taken during the winter is a Staphylinid secured while on a visit to Gainesville. While not found near the coast it is included among the others noted in this second paper bearing the above title.

Biocrypta magnolia, sp. nov.

Elongate, subfusiform, feebly convex. Dark reddish or chestnut-brown, the antennæ and legs paler. Head subquadrate, as wide as elytra, strongly narrowed in front of eyes, vertex coarsely and sparsely punctate; basal joint of antennæ as long as the next four united, third slightly longer than second, which is equal to fourth. Thorax one-third longer than wide, apex as wide as base, sides almost parallel, angles rounded; disc highly polished and with an irregular row of rather coarse punctures each side of middle, and numerous scattered ones between these and the margins. Elytra as long as and slightly wider than thorax, about one-fourth longer than wide, sides parallel, disc coarsely, closely, shallowly and somewhat rugosely punctate. Abdomen but slightly